

REMARKS

1. Summary of the Office Action

In the non-final Office Action mailed on March 10, 2009, the Examiner provisionally rejected claims 1-21 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent. App. No. 10/830,575 and over claims 1-20 of U.S. Patent App. No. 10/861,065. The Examiner rejected claims 1, 8, 15, 16, 20, and 21 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent App. Pub. No. 2001/0010689 (Awater). The Examiner rejected claims 2-7, 9-14, and 17-19 under 35 U.S.C. § 103(a) as being unpatentable over Awater.

2. Summary of the Response

In this response, Applicant has amended claims 1-21 to typographical errors and to clarify the language of the claims. As such, the amendments to claims 1-21 are generally supported by the specification. Now pending are claims 1-21, of which claims 1, 8, 15, and 20 are independent and the remainder are dependent.

3. Response to the Rejections of Claims 1-21 on the Ground of Nonstatutory Obviousness-Type Double Patenting

The Examiner provisionally rejected claims 1-21 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent. App. No. 10/830,575 and over claims 1-20 of U.S. Patent App. No. 10/861,065.

In response, Applicant respectfully requests the Examiner to withdraw these rejections as the claims are patentably distinct. Alternatively, Applicant requests the Examiner to hold the provisional double patenting rejections in abeyance until the instant application is otherwise deemed allowable. The Examiner is requested to withdraw the provisional double-patenting rejections at that time, as required, to permit the application to issue as a patent. *See M.P.E.P. § 804(I)(B)(1).*

4. Response to Rejections Under 35 U.S.C. §§ 102 and 103

- a. Claims 1, 8, 15, and 20 are not anticipated by the cited art, as Awater does not disclose use of beacon frames as recited in claims 1, 8, 15, and 20.

The Examiner rejected claims 1, 8, 15, and 20 under 35 U.S.C. § 102(b) as being anticipated by Awater. Applicant respectfully requests the Examiner withdraw the rejections of claims 1, 15, and 20 under 35 U.S.C. § 102(b) as Awater does not disclose all of the features recited in claims 1, 8, 15, and 20.

Amended claim 1 recites, *inter alia*, “determining a transmit opportunity on the shared-communications channel wherein the transmit opportunity is based on the time at which the beacon frame is received and on the beacon interval” and “notifying a second transceiver of the transmit opportunity wherein the second transceiver communicates in accordance with a second communications protocol using the shared-communications channel.”

Awater describes “an interoperability device in a communication system which integrates an IEEE 802.11 transceiver and a Bluetooth transceiver.” Awater, Abstract. Awater indicates that “[t]he IEEE 802.11 MAC also defines Beacon frames, sent at a regular interval by an AP to allow STAs to monitor the presence of the AP.” Awater, ¶ 0007. *See also* Awater, ¶ 0003 (defining AP as access point).

Awater describes “[a] dual mode transceiver 100 operates in accordance with the invention in one of two modes. A first mode is a switching mode and a second mode is a multiplexing mode, both of which modes are discussed in further detail herein below. In the switching mode of operation, the interoperability device 106 deactivates the Bluetooth transceiver (110 / 114) whenever the IEEE 802.11 transceiver (108 / 112) is activated, and vice versa. The interoperability device 106 is adapted to make the decision as to which mode of operation to switch to or activate. There are several alternative criteria on which the interoperability device may make this decision.” Awater, ¶ 0049-0050.

Awater describes three alternatives as follows: “In a first alternative, the user of the device may decide which mode to switch to.” Awater, ¶ 0051. “In a second alternative, application software may control which mode the device switches to.” Awater, ¶ 0053. “In a third alternative, a protocol sniffer may determine whether it detects the presence of an IEEE 802.11 device or a Bluetooth device on the air interface, and set the mode of the interoperability device accordingly. When the protocol sniffer detects both Bluetooth and IEEE 802.11 devices,

it may choose a mode that the user has indicated as preferential, or it may consult the user as in the first alternative. Alternatively, the protocol sniffer may let the application decide as in the second alternative.” Awater, ¶ 0054.

Awater cursorily mentions that beacon frames are sent by an IEEE 802.11 MAC and that a dual mode transceiver can switch modes, as quoted above. However, Awater does not disclose the use of beacon frames in determining transmit opportunities. In particular, Awater is silent about beacon intervals in beacon frames. In contrast, claim 1 recites “determining a transmit opportunity ...based on the time at which the beacon frame is received and the beacon interval.”

Further, Awater is silent the combination of receiving beacon frames in a first protocol to send transmit opportunity using a second protocol, much less “receiving a beacon frame...in accordance with... a first communications protocol”, “determining a transmit opportunity on the shared-communications channel wherein the transmit opportunity is based on the time at which the beacon frame is received...” and “sending a notification of the transmit opportunity in accordance with a second communications protocol” as recited in claim 1.

For at least these reasons, Applicant submits that Awater does not anticipate claim 1 and thus is allowable over the cited art. Additionally, claims 15 and 20 recite limitations concerning determination of transmit opportunities, and determination of transmit opportunities using beacon frames, using similar language to that of claim 1 discussed above. Therefore, for at least the reasons provided for claim 1, Applicant submits claims 15 and 20 are allowable as well.

Claim 8 recites, *inter alia*, “powering down the transceiver based on a time remaining before receiving a second beacon frame.” As discussed above, Awater cursorily mentions that beacon frames are sent by an IEEE 802.11 MAC. However, Awater does not disclose the use of beacon frames to power down transceivers, much less “powering down the transceiver based on a time remaining before receiving a second beacon frame” as recited in claim 8. Claim 8 also recites determination of transmit opportunities, which were shown above with respect to claim 1 not to be disclosed by Awater. For at least these reasons, Applicant submits that Awater does not anticipate claim 8 and thus is allowable over the cited art.

In addition, Applicant submits that the dependent claims are allowable as well, as each of the dependent claims ultimately depend from an allowable base claim – either claim 1, 8, 15 or 20. Therefore, Applicant respectfully requests the Examiner withdraw the rejections under 35 U.S.C. §§ 102 and 103 for claims 1-21.

In view of the foregoing, Applicant submits that all the claims are allowable, and thus Applicant respectfully requests allowance of the application. Should the Examiner wish to discuss this case, the Examiner is invited to call the undersigned at (312) 913-3338.

Respectfully submitted,

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